



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/568,812

02/21/2006

Stanislaw Bodzak

R306456

7230

2119 7590 06/22/2009
RONALD E. GREIGG
GREIGG & GREIGG P.L.L.C.
1423 POWHATAN STREET, UNIT ONE
ALEXANDRIA, VA 22314

EXAMINER

JACOBS, TODD D

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

06/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,812	Applicant(s) BODZAK, STANISLAW	
	Examiner TODD D. JACOBS	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3746

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/3/2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA) in view of Zenith (GB 750,673).

4. In re claim 10, AAPA describes "in a fluid pump for use in a fuel injection apparatus of an internal combustion engine and having a housing that contains a pump chamber in which at least one rotary driven delivery element is contained, which delivery element delivers fluid to a pressure chamber from an intake chamber connected to a reservoir, and having a pressure limiting valve for limiting the pressure prevailing in the pressure chamber, which valve has a valve piston inside the housing, the valve piston being acted on in the closing direction by a prestressed closing spring and being acted on in the opening direction by the pressure prevailing in the pressure chamber and, when a predetermined pressure in the pressure chamber is exceeded, opens a connecting conduit from the pressure chamber to the intake chamber, and a filter preceding the fluid pump and/or a filter, following the fuel pump" (claim 10

Art Unit: 3746

lines 1-10 of the instant application). **Note further the discussion of "Prior Art" on page 1 of the specification, specifically in paragraph 3, line 15, "usually the pump is preceded by a filter...or is followed by a filter".**

5. However, AAPA fails to describe the improvement wherein the fluid pump comprises a pressure chamber having a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter, and wherein the pressure prevailing in the pressure chamber influences the force on the valve piston in the closing direction in such a way that as the pressure in the pressure chamber decreases, the force on the valve piston in the closing direction increases.

6. Nevertheless, Zenith, with reference to figure 3 below, describes a fluid pump with a pressure chamber (25) wherein the pressure prevailing in the pressure chamber (25) influences the force on the valve piston (23) in the closing direction in such a way that as the pressure in the pressure chamber (25) decreases, the force on the valve piston (23) in the closing direction increases. The advantage of this pressure chamber, as described by Zenith on page 1, line 34 is to "provide in a pump of this type an exact regulation of the pump delivery pressure".

Fig. 4

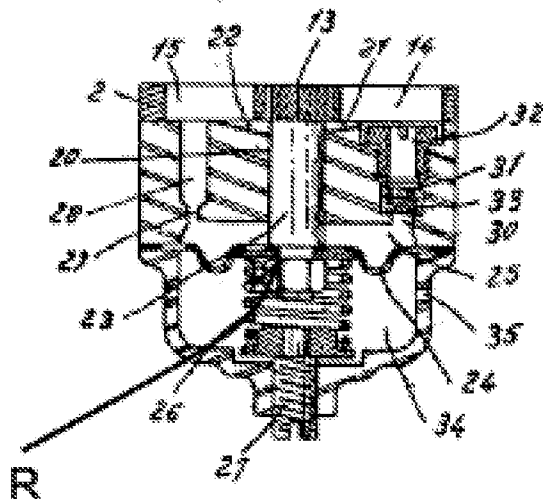


Fig. 1

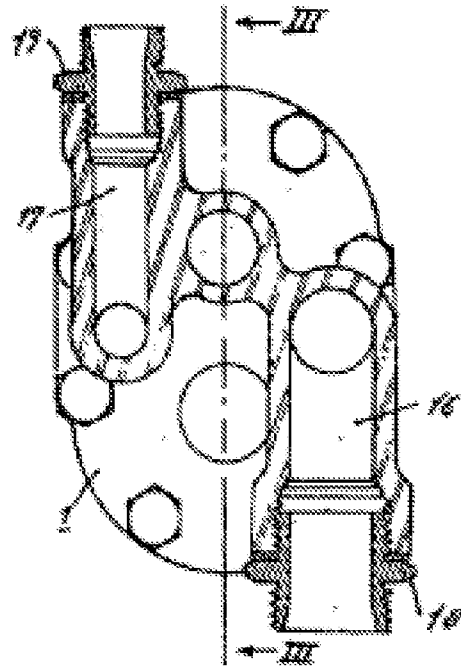


Fig. 2

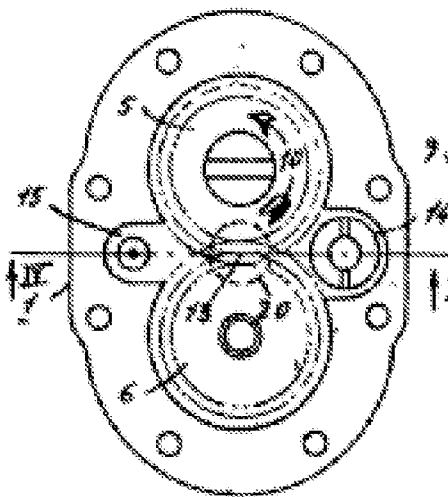
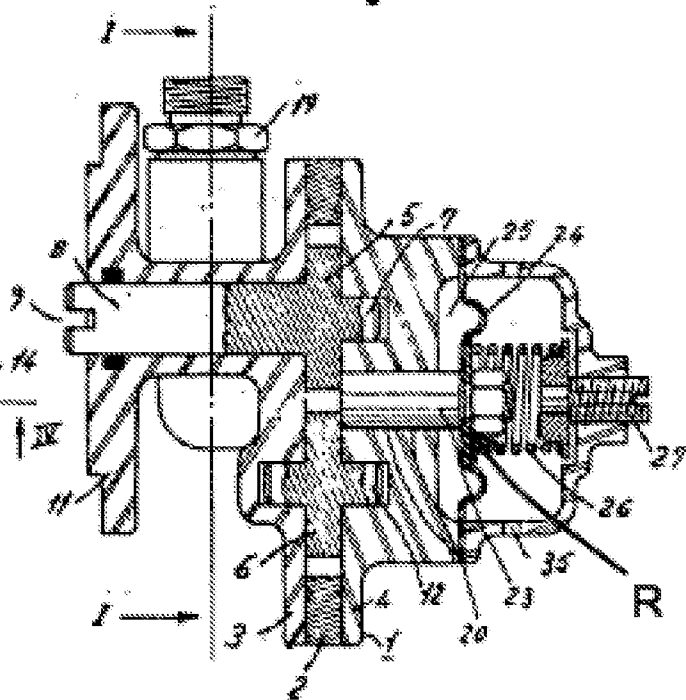


Fig. 3



Art Unit: 3746

7. Therefore it would be obvious to one having ordinary skill in the art at the time of the invention to add a pressure chamber as described by Zenith wherein the pressure prevailing in the pressure chamber influences the force on the valve piston in the closing direction in such a way that as the pressure in the pressure chamber decreases, the force on the valve piston in the closing direction increases in order to regulate the pump delivery pressure.

8. Note that while Zenith does not disclose the pressure chamber having a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter, if combined with AAPA described above, Zenith's pressure chamber would inherently have a connection to a region downstream of the preceding filter or a connection to a region downstream of the following filter.

9. Note further that the combination of AAPA/Zenith will inherently consist of **the valve piston to be offset from a symmetrical center of the pump chamber**. Fig. 4 above clearly shows the valve piston off-center from the symmetrical center of the chamber 13 (in the up/down direction shown in Fig. 4).

10. In re claim 11, with reference to figure 3 above, Zenith discloses the pressure chamber (25) delimited by a moving wall (24), one side of which is acted on by the pressure prevailing in the pressure chamber (25) and the other side of which is acted on by a prestressed spring (26) that pushes the wall (24) toward the valve piston (23) in its closing direction.

11. In re claim 12, Zenith discloses the moving wall (24) supported against the valve piston (23) by means of a rod (R).

12. In re claims 13-14, with reference to figure 3 above, Zenith discloses the moving wall (24) is embodied in the form of a diaphragm.

13. In re claims 15-18, with reference to figures 2 and 3, Zenith discloses the valve piston (23) at least partially delimiting the pump chamber (13) in the direction of the rotation axis of the

Art Unit: 3746

at least one delivery element (5, 6), wherein the closing spring (26) presses the valve piston (23) against the end surface of the at least one delivery element (5, 6) oriented toward it, which end surface functions as a valve seat, and wherein the pressure prevailing in the pressure chamber (25) acts on at least part of the end surface of the valve piston (23) oriented toward the at least one delivery element (5, 6).

14. In re claims 19-21, with reference to figures 2 and 4, Zenith discloses a connecting conduit (21) between the delivery chamber (13) and the intake chamber (14) embodied in the form of a groove let into a housing part facing the end surface of the at least one delivery element (5, 6) and the valve piston controls the passage through this groove.

15. In re claim 22, with reference to figure 4, Zenith discloses that as pressure in the delivery chamber (13) increases, the valve piston (23) opens an ever greater through flow cross section in the connecting conduit (21).

16. In re claims 23-24, with reference to figure 4, Zenith discloses the diameter of the valve piston (23) greater than the width of the connecting conduit (21).

17. In re claims 25-29, Zenith discloses the valve piston (23) guided so that it is able to move in a bore (23, 25, 34) of a housing part, and wherein the intake chamber (14) is connected to a chamber (25) that is delimited in the bore (23, 24, 34) by the rear surface of the valve piston (23) oriented away from the end surface of the at least one delivery element (5, 6).

Response to Arguments

18. Applicant's arguments filed have been fully considered but they are not persuasive. Applicant argues further that the combination of AAPA/Zenith provides no filter up or downstream from the pump. However, in the Instant Application, in the section labeled "**Prior Art**" states on page 1 of the specification, specifically in paragraph 3, line 15, "usually the pump is preceded by a filter...or followed by a filter".

Art Unit: 3746

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TODD D. JACOBS whose telephone number is 571-270-5708. The examiner can normally be reached on Monday - Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit
3746

/TODD D. JACOBS/
Examiner, Art Unit 3746